

## PATENT ABSTRACTS OF JAPAN

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## (54) METHOD FOR DRIVING VARIABLE RESISTOR ELEMENT AND STORAGE DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a method of driving a variable resistor element including a perovskite oxide with electric resistance varying by applying voltage pulses, capable of stably keeping reversible resistance variation operations.

SOLUTION: The variable resistor element is formed by providing the perovskite oxide 2 between a first electrode 1 and a second electrode 3. The element has resistance history characteristics that the electric resistance between the first electrode 1 and the second electrode 3 varies by applying voltage pulses with constant polarity between the first and second electrodes 1 and 3, and further the rate of change in the resistance value changes from positive to negative for an increase in accumulated pulse applied time during the application of the voltage pulses. The voltage pulses are applied to the variable resistor element so that the accumulated pulse applied time does not exceed the specific accumulated pulse applied time when the rate of change in the resistance value for the increase in the accumulated pulse applied time changes from positive to negative in the resistance history characteristics.

